Application Serial No.:	10/040,975
Appellants:	Crump et al.
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Art Unit:	2143
Examiner:	George C. Neurauter
Confirmation No.:	1741
Attorney Docket No.:	NOR-099 (13612BAUS01U)
Title:	Central Control of Multiple Address Domains within a Router

Commissioner for Patents
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CORRECTED APPEAL BRIEF

In response to the Notification of Non-Compliant Appeal Brief mailed by the U.S. Patent and Trademark Office on June 25, 2007, requiring the status of all claims to be identified in the status of claims section, including canceled claims, Appellants hereby submit this Corrected Appeal Brief to the Board of Patent Appeals and Interferences.

Appellants submit that this paper corrects the informality identified by the Notification of Non-Compliant Appeal Brief and brings the Appeal Brief filed on May 18, 2007 into compliance. Authorization is herein granted to apply any fees occasioned by this paper or credits due in this case to Deposit Account 50-2295.

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The Real Party in Interest is Nortel Networks Limited, the owner of all rights of this patent application by virtue of an assignment, recorded at reel and frame number 012832/0282.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claims pending in the patent application include claims 1, 3-4, 6-7, 9-10, and 12. Claims 2, 5, 8, 11, 13-20 are canceled. A final Office Action mailed September 22, 2006 rejects all pending claims 1, 3-4, 6-7, 9-10, and 12. Appellants' response to the final Office Action amended independent claims 1 and 7. The claim amendments were not entered. Claims 1, 3-4, 6-7, 9-10, and 12 remain pending in the application and are the subject of this appeal.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to Appellants' response to the final Office Action.

SUMMARY OF CLAIMED SUBJECT MATTER

INDEPENDENT CLAIM 1

Appellants' invention, as recited in independent claim 1, features a method for routing packets in a router having a plurality of router interfaces (FIG. 3, paragraph 26) through which the packets are received from a plurality of address domains (FIG. 3, paragraph 26). A separate routing table is dedicated to each address domain of the plurality of address domains (FIG. 3, paragraph 27). Each router interface is associated with one of the routing tables (FIG. 3, paragraph 28). A single IP stack is executed to receive a packet from any of the router interfaces

and to identify the associated routing table for handling the received packet (FIG. 4, paragraph 30).

INDEPENDENT CLAIM 7

Appellants' invention, as recited in independent claim 7, features a router comprising a plurality of router interfaces through which packets from a plurality of address domains are received (FIG. 3, paragraph 26). A separate routing table is associated with each address domain (FIG. 3, paragraph 27), and a domain manager executes a single IP stack to receive a packet from any of the router interfaces and to identify an appropriate routing table for handling the received packet (FIG. 4, paragraph 30).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The final Office Action issued the following rejection:

I.   Claims 1, 3-4, 6-7, 9-10, and 12 stand rejected under 35 U.S.C. §
        103(a) as being unpatentable over Akahane et al. (U.S. Patent
        Application Publication No. 2001/0050914), in view of Applicant's
        admitted prior art (AAPA).

The grounds of rejection to be reviewed on appeal are grounds I as applied to
all claims pending in the application, namely claims 1, 3-4, 6-7, 9-10, and 12.

Grounds I

Independent Claims 1 and 7

I.   The Applicants' Admitted Prior Art is being mischaracterized in its
combination with the primary reference.

The final Office Action rejects claims 1, 3-4, 6-7, 9-10, and 12 under 35
U.S.C. § 103(a) as being unpatentable over Akahane in view of AAPA.

Akahane discloses a router (9) with multiple physical interfaces connected
to multiple Virtual Private Networks (VPNs). The router uses a separate routing
table for each different VPN and executes processes for determining which
routing table to use upon receiving a packet over one of the interfaces. Unlike
the Appellants' invention, however, "Akahane does not expressly disclose
executing a single IP stack to receive packets from any of the router interfaces
and to identify an appropriate routing table for received packets." (See the final
Office Action, second paragraph on page 4). FIG. 4 of Akahane attests to this.

As shown in FIG. 4, Akahane's router has multiple packet layer processors
(52) and at least four physical interfaces, numbered 1 through 4. Each packet
layer processor maintains a routing table for each VPN to which the router is
connected (FIG. 5). One packet layer processor handles packets arriving on
physical interfaces 1 and 2, whereas another packet layer processor handles
packets arriving on physical interfaces 3 and 4. However, neither packet layer
processor handles packets received on <u>any</u> of the physical interfaces, i.e., the
packet layer processor that handles packets arriving on physical interfaces 1 and
2 cannot handle packets arriving on physical interfaces 3 and 4. Conversely, the
packet layer processor that handles packets arriving on physical interfaces 3 and
4 cannot handle packets arriving on physical interfaces 1 and 2. Thus, Akahane
is in effect using multiple protocol stacks to handle incoming packets – one for

each packet layer processor. Therefore, unlike the Appellants' claimed invention, Akahane does not use a single IP stack to receive a packet from any of the router interfaces of the router and to identify the associated routing table.

Because Akahane lacks this particular feature of the Appellants' invention, the final Office Action refers to paragraph [0003] of the Appellants' Background (AAPA) in order to suggest modifying Akahane to have only one IP stack that receives packets from any of the router interfaces. Granted, FIG. 1 and paragraph [0003] of the Appellants' Background does describe a router running a single IP stack that receives packets from multiple interfaces. However, the network environment within which the router of paragraph [0003] operates does not have multiple addresses domains – rather, all of the interfaces connect to the same address domain. Moreover, the router of paragraph [0003] has only one routing table. Therefore, paragraph [0003] of AAPA is teaching the use of a single IP stack whenever you have only one address domain and only one routing table. To interpret the use of a single IP stack by a router connected to only one address domain as a teaching or a suggestion for using a single IP stack when the router is interfacing multiple address domains is to interpret the Appellants' Background out of context. Consequently, such misinterpretation distorts the teachings of the Appellants' Background.

For instance, notably absent from paragraph [0003], and from the rest of the Background, is the suggestion that one IP stack may be used to receive packets from any of the interfaces when there are multiple routing tables and multiple address domains. To the contrary, as is evident from paragraphs [0007] through [0009], the Background teaches the use of multiple IP stacks when there are multiple routing tables and multiple address domains. Thus one of ordinary skill in the art, presented with the Appellants' Background and Akahane, would not consider using a single IP stack for receiving a packet from any of the router interfaces when there are multiple routing tables and address domains. This is because when there are multiple interfaces connected to multiple address domains, as there are in Akahane, the Background teaches

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using multiple IP stacks. Any suggestion to use only one IP stack to receive a packet from any of the router interfaces, when there are multiple routing interfaces and multiple address domains, comes not from the Appellants' Background nor from Akahane, but from the Appellants' own invention. Appellants, therefore, submit that there is no suggestion to combine the Akahane with the AAPA as suggested by the Examiner, and respectfully request withdrawal of the rejection.

Appellants filed a 37 C.F.R. § 1.131 affidavit on November 23, 2005 in an effort to show conception of the invention prior to the effective date of the Akahane reference and its subsequent constructive reduction to practice. The Advisory Action dated January 26, 2007 entered the affidavit, but then rejected it on two grounds: (1) not every inventor signed the affidavit; and (2) diligence was not shown in reducing the invention to practice from the date of the Akahane reference to the filing date of the present application.

With respect to the first ground of rejection, Appellants are submitting herewith a 37 C.F.R. § 1.131 affidavit of the inventor, Mr. Richard Crump, who had not signed the earlier affidavit. The affidavit signed by Mr. Crump is similar to that signed by Ms. Janet Doong: in particular, the submitted evidence is unchanged (i.e., no new evidence regarding the timing of conception of the invention is being presented with this affidavit). Appellants are herewith complying with the _formal_ requirements of the rules, as properly explained by the Examiner.

With respect to the second ground for rejecting the previously submitted affidavit, i.e., diligence, Appellants note that approximately nine months separate the effective date of the Akahane reference and the filing date of the Appellants' patent application. Appellants submit that this is a reasonable period for the preparation and filing of the present patent application, considering its technological complexity and the particular timeframe of its filing. As one may recall, the years 2000-2001 were a particularly busy period for the filing and prosecution of patent applications, being in the midst, if not at the pinnacle, of the "dot-com" boom. Moreover, as articulated by the Federal Circuit, reasonable diligence does not require a party to work constantly on the invention or to drop all other work. Bey v. Kollonitsch, 806 F.2d 1024, 1028,

231 USPQ 967, 970 (Fed. Cir. 1986). Any assertion of insufficient diligence with respect to the filing of the Appellants' patent application is merely a subjective opinion and not based on any fact or law. Appellants respectfully submit that in the absence of any evidence of there being <u>insufficient</u> diligence, the affidavits, evidence, and timing of the subsequent filing of the patent application are sufficient to demonstrate possession of the invention prior to the effective date of the Akahane reference and its reasonably diligent reduction to practice, in accordance with § 37 C.F.R. 1.131.

<u>CONCLUSION</u>

In view of the arguments made herein, Appellants submit that the application is in condition for allowance.

Respectfully submitted,

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1. A method for routing packets in a router having a plurality of router interfaces through which the packets are received from a plurality of address domains, the method comprising:

    dedicating a separate routing table to each address domain of the plurality of address domains;

    associating each router interface with one of the routing tables; and

    executing a single IP stack to receive a packet from any of the router interfaces and to identify the associated routing table for handling the received packet.

2. (canceled)

3. The method of claim 1, wherein a mapping array associates interfaces connecting to the same address domain with the same routing table.

4. The method of claim 1, wherein executing a single IP stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet.

5. (canceled)

6. The method of claim 1 wherein each of the plurality of address domains represents a virtual private network.

7. A router comprising:

a plurality of router interfaces through which packets from a plurality of address domains are received;

a separate routing table associated with each address domain; and

a domain manager executing a single IP stack to receive a packet from any of the router interfaces and to identify an appropriate routing table for handling the received packet.

8. (canceled)

9. The router of claim 7, wherein the domain manager comprises a mapping array that associates each interface to a routing table.

10. The router of claim 7, wherein the domain manager executing the single stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet.

11. (canceled)

12. The router of claim 7 wherein each of the plurality of address domains represents a virtual private network.

13.- 20. (canceled)

EVIDENCE APPENDIX

(1)   37 C.F.R. § 1.131 affidavit executed by Ms. Janet Doong.

(2)   37 C.F.R. § 1.131 affidavit executed by Mr. Richard Crump.

(3)   Chapter Eight, titled "VPN Manager," of a document titled "MPLS VPN Functional Specification (Exhibit A), dated May 12, 2000.

(4)   Nortel Networks Invention Disclosure, dated September 26, 2000.

(5)   A second Nortel Networks Invention Disclosure, dated September 28, 2000.

(6)   Invention Disclosure Submission Reply (Exhibit D), dated October 12, 2000.

RELATED PROCEEDINGS APPENDIX

None.